

What is claimed is:

1. A cell culture micro-chamber comprising a cell culture section, at least two channels for connecting the cell culture section to the outside, a means for opening or closing the channels, and a means for optically observing the cell culture section and the opening or closing of the channels, wherein one of the channels is a flow path through which a culture solution which may contain cells can be injected into the cell culture section, while another one of the channels is a flow path through which a culture solution which may contain cells can be discharged from the cell culture section, at least a portion of said channels is surrounded by an elastic material, and the means for opening and closing is for opening or closing the channels or altering the width of the channels by pressing or drawing the channels from outside in a direction substantially perpendicular to the observation direction of the means for optically observing.
2. A cell culture micro-chamber according to claim 1 wherein the width of the channels when not operating the means for opening and closing is on the same extent as the size of a target cell.
3. A cell culture micro-chamber according to claim 1 or 2 wherein the means for opening and closing has a space adjacent to the channels, the space being filled with a gas or liquid and the size of the space being altered by changing the pressure of the gas or liquid, whereby the channels are opened or closed, or their widths are altered.
4. A cell culture micro-chamber according to any one of claims 1 to 3 wherein the elastic material is a silicone-type resin.